

**REMARKS**

This is in response to the Office Action dated August 19, 2003. Claims 2, 10 and 18 have been canceled. New dependent claims 33-35 have been added. Thus, claims 1, 3-9, 11-17 and 19-35 are now pending.

Initially, it is noted that the undersigned has not yet received a copy of the PTO-1449 corresponding to the IDS filed Feb. 15, 2001. Thus, it is respectfully requested that the Examiner provide the undersigned with an initialed copy of the PTO-1449 corresponding to the same.

An IDS has been filed herewith. Moreover, JP 11-109393 listed in the IDS filed herewith should be considered since its English counterpart (US 6,256,082) has been provided and also because the reference is discussed on page 42 of the instant specification.

Claim 1 stands rejected under 35 U.S.C. Section 102(b) as being allegedly anticipated by Koma (US 5,608,556). This Section 102(b) rejection is respectfully traversed for at least the following reasons.

Claim 1 as amended requires "orientation-regulating region including a first region in which an electric field applied across the liquid crystal layer by the first electrode and the second electrode has a first electric field strength, a second region in which the electric field has a second electric field strength which is smaller than the first electric field strength, and a third region in which the electric field has a third electric field strength which is smaller than the second electric field strength, wherein the first, second

and third regions are arranged in this order in a predetermined direction; and wherein a boundary between the first region and the second region, and a boundary between the second region and the third region, are oriented so as to each extend in a direction perpendicular to the predetermined direction."

For purposes of example and without limitation, Fig. 1B of the instant application illustrates a first region (R1) in which an electric field (see EQ) applied across the liquid crystal layer by the first electrode (14) and the second electrode (22) has a first electric field strength (see EQ), a second region (R2) in which the electric field has a second electric field strength which is smaller than the first electric field strength, and a third region (R3) in which the electric field has a third electric field strength which is smaller than the second electric field strength, wherein the first, second and third regions are arranged in this order in a predetermined direction. This "predetermined direction" in Fig. 1B is from right-to-left across the page. Moreover, Figs. 1B and 1D illustrate that a boundary between the first region (R1) and the second region (R2), and a boundary between the second region (R2) and the third region (R3), are oriented so as to each extend in a direction perpendicular to the predetermined direction." In other words, these boundaries between R1/R2 and between R2/R3 extend in a direction into or out of the page in Fig. 1B (see Fig. 1D).

This unique claimed arrangement of boundary directions permits one or more of the example advantages discussed from pages 19-20 to be efficiently realized. In particular, the instant specification explains for example that "if one employs a structure

where each of the upper layer opening and the lower layer opening has a side extending in a direction *perpendicular* to the predetermined direction, and the boundary between the first region and the second region and the boundary between the second region and the third region extend in parallel to the side of the upper layer opening and the lower layer opening, the *directions of the inclined electric fields produced around the respective region boundaries coincide with each other also in terms of the azimuth angle direction (the direction in the display plane), thereby increasing the orientation-regulating effect.*" (e.g. pg. 19, line 18 to pg. 20, line 2). Thus, it can be seen that the claimed direction(s) of the boundaries are highly advantageous in that the orientation-regulating effect can be improved.

Koma fails to disclose or suggest the aforesaid underlined and quoted aspect of claim 1. In particular, Koma fails to disclose or suggest that "a boundary between the first region and the second region, and a boundary between the second region and the third region, are oriented so as to each extend in a direction perpendicular to the predetermined direction" as required by claim 1. In fact, Koma teaches the opposite of the invention of claim 1 in this respect.

Koma's orientation control electrode 22 surrounds the periphery of electrode 17 (col. 5, lines 32-34). For example, see Fig. 3 of Koma. Thus, the boundary in Koma between electrodes 17 and 22 are substantially *circular* in shape and thus cannot realize the requirement of claim 1. In other words, because Koma's alleged boundaries are circular in shape, they cannot "extend in a direction perpendicular to the predetermined

direction" as required by claim 1. Thus, it can be seen that claim 1 cannot be anticipated or otherwise unpatentable over Koma since Koma teaches directly away from the invention of claim 1 in the aforesaid respect.

Claim 9 requires that "a boundary between the first region and the second region and a boundary between the second region and the third region each extend in a direction *perpendicular* to the predetermined direction." Again, Koma fails to disclose or suggest this aspect of claim 9.

Claim 17 requires that "each of the upper layer opening and the lower layer opening has a side extending in a direction perpendicular to the predetermined direction, and a boundary between the first region and the second region and a boundary between the second region and the third region extend in *parallel to the side*." Again, Koma fails to disclose or suggest this aspect of claim 17.

For at least the foregoing reasons, it is respectfully requested that all rejections be withdrawn. All claims are in condition for allowance. If any minor matter remains to be resolved, the Examiner is invited to telephone the undersigned with regard to the same.

SHIMOSHIKIRYO

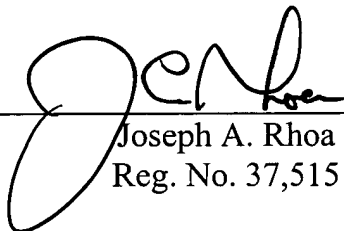
Appl. No. 09/783,217

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Respectfully submitted,

**NIXON & VANDERHYE P.C.**

By: \_\_\_\_\_

A handwritten signature in black ink, appearing to read "J. Rhoa", is written over a horizontal line. The signature is stylized with a large loop at the beginning and a cursive "Rhoa".

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